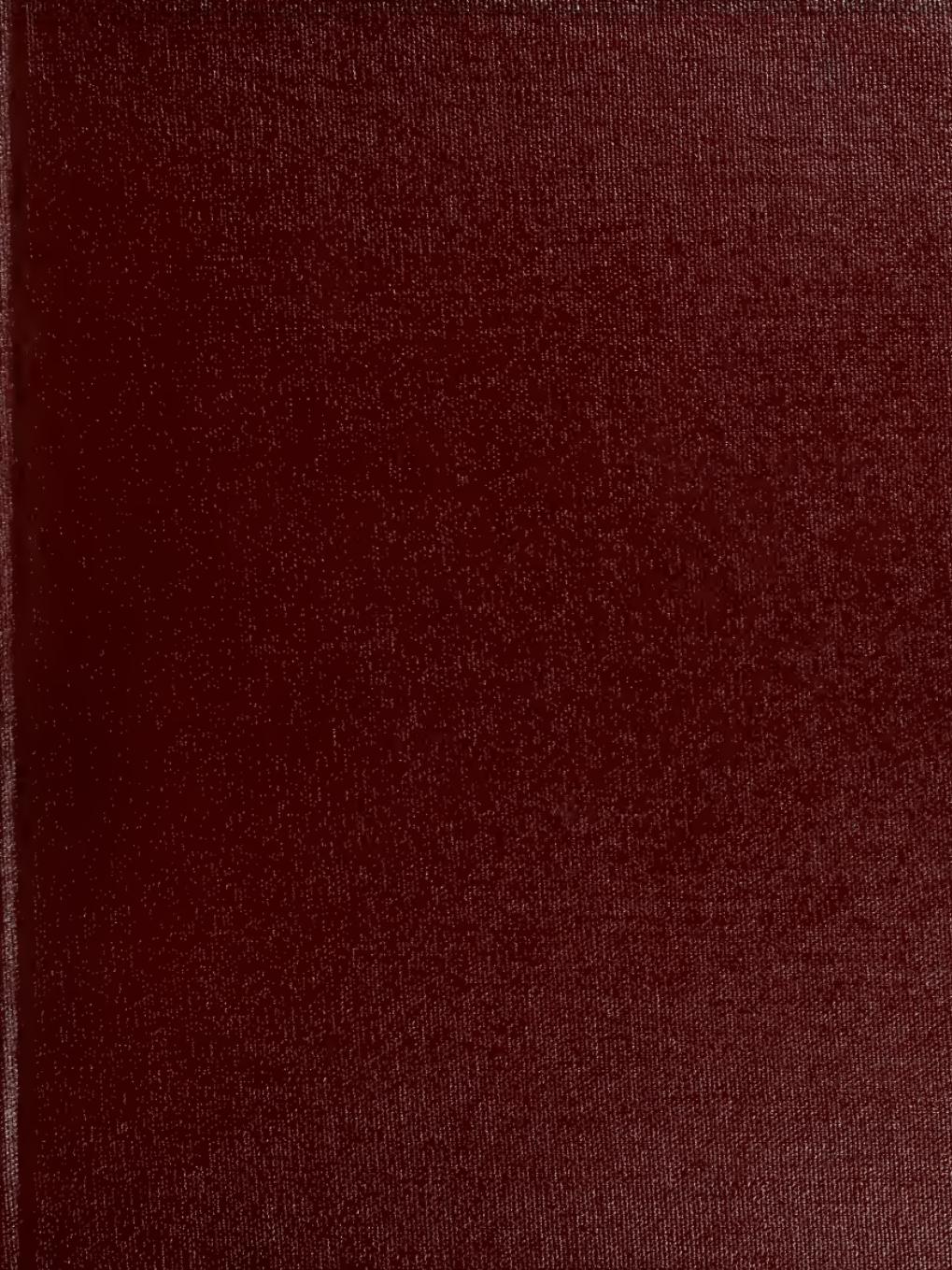
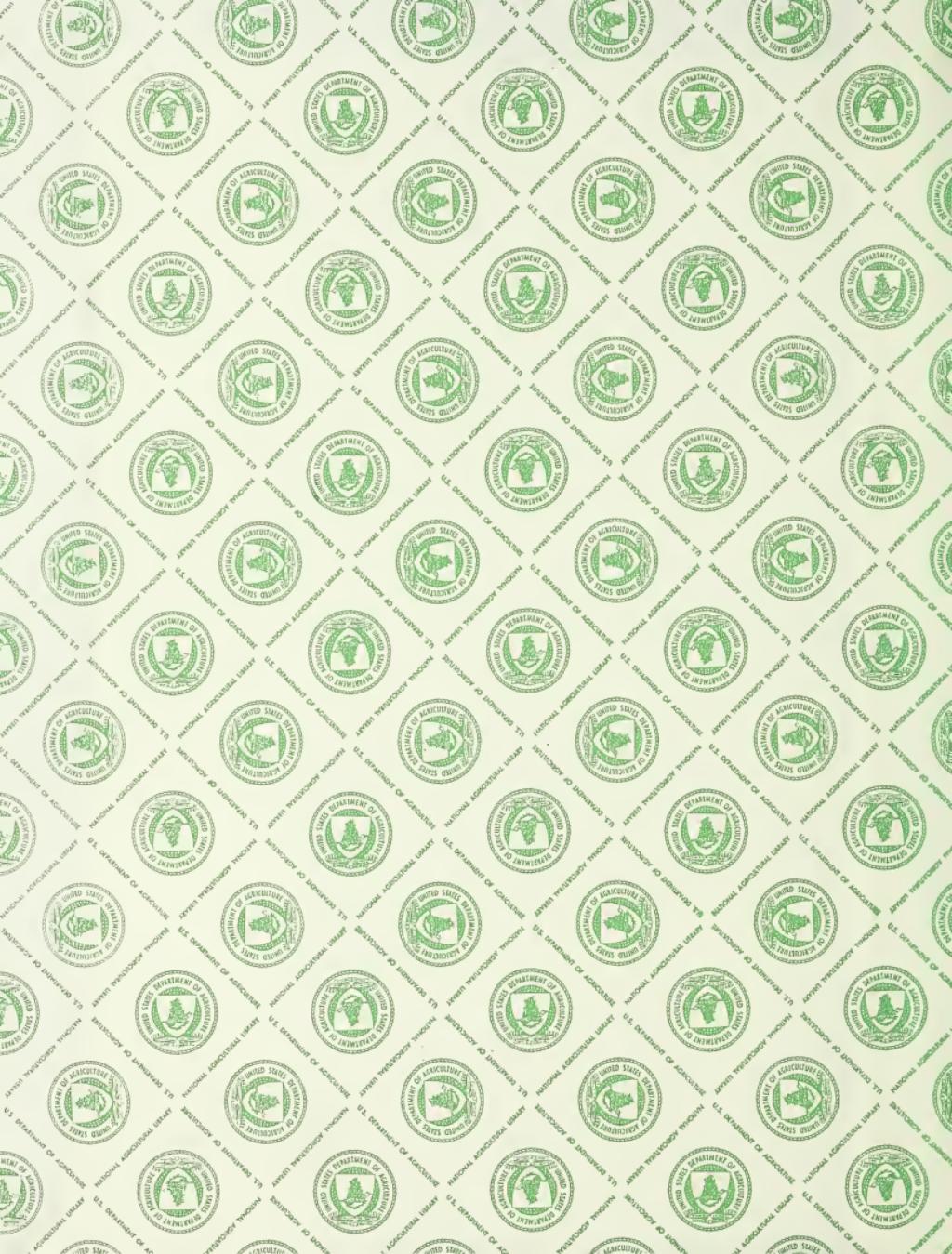


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# AGRICULTURAL LIBRARIES INFORMATION NOTES

## THE MAN BEHIND THE PEANUT

by  
Edith A. Brown  
Agricultural Stabilization and Conservation Service  
U.S. Department of Agriculture

A wealth of information is written about George Carver's creative research with various crops, plants and the soil. His important contributions in the fields of agriculture, science, industry, art, and dentistry have been recognized not only in America, but around the world.

Little is written, however, about Carver as a person--what he was like; his beliefs; his goals. Who was this man with such deep concern for the southern farmers and the rural poor? What about the man who made 300 products from the peanut? Was he a scientist? An agriculturalist? A chemist? An artist? Such questions may be prevalent in the minds of many, particularly at this time when America is recognizing contributions of great statesmen.

"Baby Boy" Carver was born on July 12, 1864 in Diamond Grove, Missouri. His parents were slaves on the plantation of Moses Carver. When the baby and his mother, Mary, were captured by slave raiders, Moses Carver offered a reward of 40 acres of land plus a race horse for the safe return of mother and child. However, Carver's mother was never found, so the bushwhacker settled for the horse as an "even" exchange for the frail and sickly baby.

As was the custom among slaves, he was given the surname of his master. "His unfailing honesty and industry earned him the name 'George Washington,'" W. Wade Moss said in his article, *The Wizard of Tuskegee*. "George, at a very early age, acquired not only a fervent love for agriculture, a reverence for things that grow," Moss said, "but he unconsciously absorbed a fundamental knowledge of agricultural principles."

### PLANNED TO HAVE A SCHOOL FOR HIS PEOPLE

When Carver was ten years old, he set out for the village of Neosho without money or friends. He slept in an old barn until he picked up odd jobs. At the age of 12, he begged a lift in a wagon as far as Fort Scott, Kansas. Here he began his fight for a college education, a fight which lasted for 18 years before he obtained a degree.

From Fort Scott he travelled to Minneapolis, Kansas, where he graduated from high school. He then went to Highland, Kansas, where he worked diligently to save money to go to college. "No job proved too tedious or menial for him," Moss said.

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Carver settled in Ness County, Kansas, where he built a sod house and put in crops. He found that this dismal, dry land was suitable only for grazing cattle, so he sold his homestead. With the proceeds, he paid his way to Ames, Iowa, where he applied for admission to Iowa State University.

Refused at Ames, he attended Simpson College, and studied music and art in addition to his regular courses, earning his tuition by working in the college laundry.

After graduating from Simpson College, Carver again applied for admission at Ames. He was accepted, but there was one serious problem—he had no home. "Fortunately, 'Tama Jim' Wilson, then Dean of the College of Agriculture, and later Secretary of the United States Department of Agriculture, befriended George and permitted him to sleep in his office," Moss said. The money he had earned and saved at Simpson paid his tuition at Ames, but left him only ten cents.

"However, of greater value than money to him was his indomitable will and courageousness in the face of hardships." With his dime he bought suet and meal, and for a week he lived on his meager fare. By the end of the week he had obtained laundry to wash. His laundry prospered and he became self-supporting throughout the following years of his college work at Ames.

Carver received his B.S. degree in agriculture, and he continued his work for another two years receiving the degree of Master of Science. In 1896, he became the first Director of Agriculture at Tuskegee Institute in Alabama. "I've always planned to have a school for my people," George Washington Carver said when he arrived at Tuskegee. "I shall teach not just book subjects, but everything that will help make their lives brighter."

#### GAVE TO AGRICULTURE A NEW OUTLOOK

Carver was a pioneer in the utilization of agricultural waste and natural resources, finding new uses for crops, and developing products of industrial value. "The problems that he faced when he arrived at Tuskegee were of great magnitude,"

A. W. Curtis, Jr., a long-time friend and later his assistant, said. The crop-worn and badly eroded soil

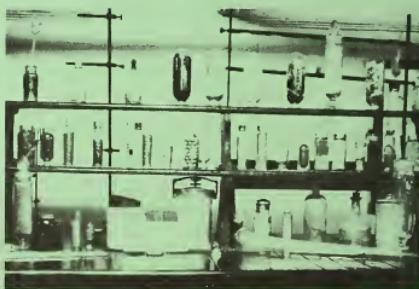
of the region was depicted in the living conditions and appearance of the people. Improper farming practices and a dwindling cotton market made the problem an acute one.

Advocating the diversification of crops and soil conservation, Carver gave to agriculture a new outlook; to industry a new alliance; and to chemistry a new meaning, Curtis said.

"Dr. Carver experimented with soybeans, peanuts, sweet potatoes, clovers, corn, and many other crops," Curtis said, "but he urged farmers to grow peanuts and sweet potatoes to replace a part of the cotton acreage because they were already being grown to a limited extent, and therefore would not be crops that the farmer did not know how to cultivate."

He wrote numerous leaflets, brochures and pamphlets for farmers, such as "Three Delicious Meals Everyday For The Farmer," "Twelve Ways To Meet The New Economic Condition Here In The South," "Ways To Save The Wild Plum Crop," "What Shall We Do For Fertilizers Next Year," and many others.

For those farmers who could not read, write, or attend the Farmers Conference held yearly at Tuskegee, Carver designed a school on wheels—the first Movable School of Agriculture. One of his best pupils, Thomas Monroe Campbell, was in charge. The work proved so effective that the U.S. Department of Agriculture employed Mr. Campbell to direct similar work in seven southern states.



*Opened in 1938, a focal point of interest inside the George W. Carver Museum is the laboratory equipment used by him at Tuskegee Institute*

*(Continued on page 3)*

*(Continued from page 2)*

"Professor Carver felt that his greatest duty was to the farmers," Florence C. Means said in a biography entitled, CARVER'S GEORGE.

#### SORTED OUT THE PEANUT PACKAGE

Carver was aware of the fact that to encourage farmers to increase the production of peanuts and sweet potatoes, and at the same time not to expand the markets for them, would be a breach of the primary principles of economics, Means said. Sorting out the contents of the tight little package that was the peanut, Carver, sometimes called the "Peanut Wizard," found water, fats, oils, gums, resins, sugars, starches, pectins, pentosans and proteins. By recombining these elements at different temperatures and under different pressures, he worked out 20 usable products from them. He rearranged the substances until he discovered over 300 useful peanut products. It was his experiments with peanuts that brought him his first world-wide fame.



*Greatly expanding the agricultural economy of the south, George Washington Carver made more than 300 products from peanuts and 118 products from sweet potatoes. He also produced paving blocks, cordage, paper, and fiber for rope from cotton, and other products from soybeans. Born of slave parents on a Missouri farm, Carver received a Masters degree in agriculture from Iowa State University and became the Director of Agriculture at Tuskegee Institute in 1896.*

"His peanut oils were selling well, though, as usual, Dr. Carver refused to accept any profit from them," Florence Means said. He did have the joy of trying them himself on children and adults paralyzed by polio, and finding by measurement that their wasted limbs gained faster under massage with his peanut oil than with other oils. Some who had been badly crippled walked again without help after the peanut-oil treatment.

The use of peanut oil for polio brought him sorrow as well as joy. Many newspapers published it as the hoped-for cure, bringing a flood of letters to Dr. Carver. In vain he published the facts: that his oil was on trial; that he made no great claims for it; that the massage and the patient's courage and faith were as important as the oil. "In spite of all he could say, he received 4,000 letters begging for more information, for help, for oil."

Meanwhile, the peanut milk proved an unquestionable blessing. The Indian leader, Gandhi, found it a healthful food, as well as the soybean formula Dr. Carver worked out for him. In Africa the milk saved lives. It proved well suited to cheesemaking, also.

By 1921 the peanut industry had become so important that the tariff on peanuts also became important. The Peanut Grower's Association asked the "Tuskegee colored man" to show the possibilities of the peanut to the Ways and Means Committee of the House of Representatives.

Carver had a wooden box in which he carried 25 or 30 specimens of his peanut exhibit. Arriving in Washington, he found no one to meet him, and asked a redcap to help him to a cab with his box. "Sorry Grandpop," the redcap said, "but I'm supposed to pick up some great scientist from Alabama and take him to the Capitol."

When Dr. Carver reached the House of Representatives, he sat quietly in the rear. At last peanuts came on the docket, and the Virginia-Carolina Cooperative Peanut Exchange attested that a "protective tariff on peanuts was the only thing that could save the sandy-land farmers from ruin." George Carver's name was called.

"Your time has been cut to ten minutes," the  
*(Continued on page 4)*

*(Continued from page 3)*

chairman said. He had come all this way for ten minutes. Dr. Carver had always said, "Make what you want out of what you have," Florence Means said. Now he had ten minutes, an audience of bored men, his array of peanut products and his self-control, wit, and gentle funmaking. With these he went to work.

His ten minutes stretched into an hour and three-quarters, and his whole audience was wide awake and asking interested questions.

Because of his discoveries, the peanut crop worked up to a value second only to that of cotton, and the one-crop system was ended.

#### DREAMED OF THINGS THAT HAD NEVER BEEN DONE

From the sweet potato Dr. Carver developed 118 useful products, fewer than from the peanut because it contains no oil. During World War I he produced a sweet-potato flour for use at Tuskegee. The bread made from it was good and widely used. It saved so much wheat for shipping overseas that Dr. Carver was called to Washington to confer about it with Army chemists and bakers.

"Things that were usually wasted were a challenge to Dr. Carver," Means said. From wood shavings he made synthetic marble so well that promoters formed a marble company and begged him to come to them as a consultant. When he refused, they brought their company to Tuskegee in order to be near him and have his advice.

From pecan shells he made milk, condiments, axle grease and 70 different dyes for silk and cotton. From the sludge left after benzine, gasoline and naphtha had been taken from crude oil, he made both rubber and dye. He found that the waste from most farm produce could be made into paper. Most of the paper on which he painted his pictures he made from corn or okra stalks.

The greater use of cotton also absorbed Dr. Carver in his later years. The market was choked with cotton and needed more outlets for it. Woven cotton was tried as a binder in road-building and proved practical, but Dr. Carver worked out a way to make a stronger, cheaper paving block using raw

cotton with only the valuable seed removed. Thus 40 bales could be used to the mile, instead of only six or eight, as when it was made into cloth.

"It has often been claimed that no man has ever given the world so much wealth as Dr. Carver," Means said. Here was one man, alone, with no group of scientists to work out his ideas, no rich organization behind him. He dreamed of things that had never been done. Entirely alone, he shuffled the elements of simple substances and found countless new products.

#### REFUSED COUNTLESS OFFERS

The sale of patents and royalties from Dr. Carver's discoveries would have made him enormously wealthy if he had been willing to take out patents. But since the knowledge had been given to him, he gave it freely to the world. "All I do is to compound what God made for man's use and delight," Carver said.

"He would pick up a common weed that I hadn't even noticed," recalls Jack Boyd, a former student. He would pull it apart, saying, "now if you ever give yourself a cut when you're shaving, just put on some of this juice. It's antiseptic." In 1935 he served as collaborator of a plant disease study conducted by the U.S. Department of Agriculture.

Although huge offers were made to him to go elsewhere, Carver stayed on at Tuskegee. An unnamed organization offered him a salary of \$175,000 a year. Thomas Edison offered him \$100,000. He refused the offers, as he had refused countless others.

To extoll Dr. Carver as just a scientist and humanitarian is not to encompass the range of his great gifts because he was also an artist, Austin Curtis said. One of his paintings won second prize at the Chicago World's Fair of 1893.

He received numerous honors--A Fellow of the Royal Society of Arts (London) in 1916; the Spingarn Medal in 1923; the Roosevelt Medal for Outstanding Contributions to Southern Agriculture in 1939--to name a few.

The Carver Museum, planned and arranged by

*(Continued on page 8, col. 1)*

## INFORMATION CENTERS

*Editor's Note: At the Science and Land-Grant Librarians Conference, Colorado State University, Fort Collins, Colorado, November 18-19, 1976, Lois Farrell, University of California, Berkeley, Agricultural Library chaired a session on agricultural research and information centers. Her summary of this session is presented herewith.*

After lunch at the end of the meeting was not a time to arouse much audience interest in sources of information on agricultural research and information centers. It was obvious earlier that reference librarians are very much interested in on-line use of bibliographic data bases. However, costs and logistics apparently have prevented other types of reference use and it did not appear from the earlier discussion that much reference use had been made on-line to answer questions about information centers (location, programs, publications, etc.).

There was very little response to the question whether the 1971 *Directory of Information Resources in Agriculture and Biology* (published by the National Agricultural Library) should be revised and updated. The only comments appeared to indicate that the directory is not being used very much at present, but no suggestions were made for changes or additions.

By contrast, however, it seemed that there was general agreement regarding the difficulty of locating information on U.S.D.A. programs, publications, and data bases. There were several questions about the Nutrient Data Bank's current program (and possible future availability on-line). None of the participants had had experience with the Federal Assistance Program Retrieval System. The suggestion was made that the National Agricultural Library's (NAL) Information Office undertake to provide referral to the appropriate people when land-grant librarians have questions concerning U.S.D.A. and other federal programs, data bases, etc. Dr. Farley recommended contacting Wallace C. Olsen, Deputy Director for Library Services at NAL, since he has had extensive contact with other federal agencies as well as internal U.S.D.A. programs.

The Library of Congress (L.C.) "Scorpio" computer retrieval system was mentioned as a new group of data bases available at L.C. for in-depth searching. Different files include information on all bills introduced in the last two Congresses (Congressional Research Center file), referral sources (National Referral Center file), recent book cataloging ("MARC" records), and a rapidly growing file of bibliographic references supplied in part from the "Tracer Bullet" series plus current references added by the LC Science and Technology Reference Service. If you have questions about the referral service, Edward Green is the agriculture referral specialist. Constance Carter is in charge of the Science and Technology Reference Section. Lists of the available LC Science Tracer Bullet series and recent NRC (National Referral Center, Science and Technology Division, Library of Congress) Switchboard Selected Information Resources publication can be obtained by writing to the Reference Section, Science and Technology Division, LC. (10 First St. S.E., Washington, D.C. 20540). The latest LC Science Tracer Bullet on Endangered Species (Plants) would probably be of interest at most land-grant institutions.

The Smithsonian Science Information Exchange data base which includes the CRIS (Current Research Information Service) file plus many thousands of other current scientific research projects, should be of interest to all reference librarians involved in searches.

National Oceanographic and Atmospheric Administration's (NOAA) Environmental Data Base Directory (EDBD) file includes information on eight or nine thousand *data* files and is constantly growing as new sources are identified; each EDBD description lists the geographic area, types of data, methods, dates collected, etc.; the plan is to provide a comprehensive nationwide inventory by 1980. One computer searchable file, for example, is the Earthquake Data File which covers 120,000 earthquakes from 1638 to the present.

The various National Institutes of Health (NIH) programs seem to be as difficult to pin down as those of the USDA subdivisions. Publications such

*(Continued on page 6, col. 1)*

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as the CANCERGRAM ON NITROSO COMPOUNDS from the International Cancer Research Data Bank (ICRDB) at the National Cancer Institute sometimes are missed by not being publicized in sources that land-grant librarians regularly see. An updated directory of agricultural and biological resources probably should include resources from National Institutes of Health, Environmental Protection Agency, Department of the Interior, etc.; for example, the United Nations Environment Program (UNEP) International Referral System could be a source of important information from other countries.

State, local or regional programs often are not known beyond the immediate vicinity; yet many of these research programs may be important sources of information. An example might be the Predator Literature Storage and Retrieval Systems based in the Denver Public Library. The responsibility for identifying, describing and reporting on these probably should rest on all of the land-grant librarians. Descriptions such as that of the Winrock International Livestock Research and Training Center are of great assistance to reference librarians and should be given dissemination through ALIN and ultimately, I would urge, through an updated directory.

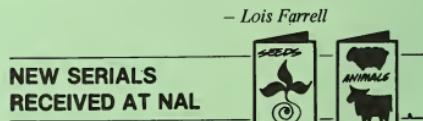
International agricultural research centers are springing up all over the world. At the present time no one source exists for identifying all of the acronyms, sources of funding, research programs, and publications of the various international centers of agricultural [and biological] interest. Those sponsored by the Consultative Group on International Agricultural Research now number nine:

IRRI	International Rice Research Institute	Los Banos, Philippines
CIMMYT	International Maize and Wheat Improvement Center	Mexico
CIAT	International Center of Tropical Agriculture	Coli, Colombia
IITA	International Institute of Tropical Agriculture	Nigeria
ICRISAT	International Crops Research Institute for the Semi-Arid Tropics	India

ILRAD	International Laboratory for Research on Animal Diseases	Kenya
ILCA	International Livestock Center for Africa	Ethiopia
CIP	International Potato Center	Peru
WARDA	West African Rice Development Association	

(One additional center was to have been located in Lebanon for midwest arid region studies).

There are many other international centers both in this country and in many foreign countries (e.g. the Asian Vegetable Research and Development Center in Taiwan, the Institute for Perennial Crops in Cameroon, and the BIOTROP-SEAMEO Regional Center for Tropical Biology in Bogor, Indonesia). As was mentioned more than once during this meeting, information centers are mushrooming everywhere, and each, while it may partially duplicate other collections, usually does have local information and reports of local research which may not receive wide dissemination. It appears that the Food and Agriculture Organization (FAO) information files and referral systems (CARIS) are not yet available for queries although this has been announced as something FAO is developing. For the present, however, unresolved questions about international agricultural research programs and information centers could be referred to the Reference staff at NAL. Any information which land grant or science librarians obtain from faculty or research staff who've visited other countries, or from visiting librarians from other countries should be shared with NAL so that others will be aware of new developments, new information centers, etc.



**NEW SERIALS  
RECEIVED AT NAL**

*Ekologikila.* Sofikila, Bulgarska akademikila na naukite. v.1, 1975. QH540.E45.

*Journal of power sources.* Lausanne, Elsevier Sequoia. v. 1, no. 1, July 1976. q. TJ 163.2.J6.



When we were planning the Science and Land-Grant Librarians meeting at Fort Collins we were concerned about the mid-November date, thinking that we might encounter the first big snow storm. But Mother Nature, as she is doing this year, fooled us and welcomed us with perfect weather. Denver sparkled in the sunshine with not a wisp of smog anywhere. The drive north to Fort Collins found us shedding our woolen jacket and basking in the Indian summer weather.

I first saw Colorado State University about 30 years ago. It was then a pleasant "college" occupying a tree lined campus. The library was housed in an attractive building in the center of a circle drive. Now the campus extends south and west and has become a great sprawling multi-university. The modern functional buildings are impressive. The library and the student union sit side by side on the "new" campus, each surrounded by broad expanses of paved courtyards and walkways. The library is a warm, inviting, book and student filled structure. On the top floor, in a kind of penthouse, we found the staff room which has undoubtedly the world's finest view. The snow capped mountains dominate the campus, the city, and the foothills beyond. Little wonder that so many of us find Colorado so attractive.

Host Lee Anderson and his staff had planned a full schedule of activities of special interest to science and agricultural librarians. A highlight of the program was an evening celebration of the one millionth volume to be added to the library. Lee was honored for his 20 years of service to Colorado State — a most remarkable record that saw the library grow during that time from a collection of 180,000 volumes. We know that other libraries have tried to attract Lee away from this setting. Seeing him so honored by his faculty and students made us understand where his heart is.

One of our objectives was to get to know each other. I believe this was accomplished, although I regret not getting around to talk with all of those

in attendance. In a selected group such as this there is a cohesion of ideas and interests; an interest in exploring solutions to the practical problems of our work.

We learned a number of things from this first meeting. Most important was that we can draw together such a group, even in competition with the many other meetings. Having it on a university campus adds a dimension of interest including visits to laboratories, information and computing centers. We were concerned that we attracted so few library directors, but I was personally pleased that those who came found the meeting interesting and participated fully. This is quite a concession for the director of a major library to make; to take two days off and concentrate on the agriculture segment of his broad responsibilities.

From the point of view of those of us at NAL the meeting was a success. We have had letters that indicate many more of you felt the same way. All this augurs well for the future. We will plan more meetings.

— Richard A. Farley

#### **IMPROVING DISSEMINATION AND USE OF SCIENTIFIC AND TECHNICAL INFORMATION**

National Science Foundation's (NSF) Division of Science Information intends to support allied research in the field of improved dissemination and use of scientific and technical information. Research proposals must be addressed to one of four categories: 1) innovations in engineering publications, 2) information and the effectiveness of scientific and engineering activities, 3) communication among interdisciplinary/applied researchers, and 4) economics of information. Closing date for submission of proposals is March 18, 1977. A copy of the solicitation may be requested by calling Carole Ganz, DSI, (202) 632-5850.

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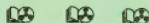
Austin Curtis, gives some idea of the versatility and industry of Dr. Carver. Opened in April of 1938, a focal point of interest is the first desk and laboratory equipment that Carver used when he came to Tuskegee.

On January 5, 1943, George Carver died. "Letters and telegrams came from President Roosevelt, Vice-President Wallace, Henry Ford and countless other notables," Florence Means said. He proved that the simplest and most distasteful tasks can be a foundation for the loftiest achievement. His belief was that: "He who does the common things of life uncommonly well can command the attention of the world."

Today, in a grassy clearing near the chapel not far from the Booker T. Washington monument, stands a curved stone seat of classic beauty. Within its arc lies a man-length marble slab with this inscription:

"A life that stood out as a gospel of self-sacrificing service. He could have added fortune to fame but caring for neither he found happiness and honor in being helpful to the world. The center of his world was the South where he was born in slavery some 79 years ago, and where he did his work as a creative scientist."

George Washington Carver, the man behind the peanut, proved that a black slave baby who had been thrown away could become one of the great men of the world.



*(Continued from page 10, col. 2)*

Numbers in the *Occasional Papers* series are available from: Publications Office, Graduate School of Library Science, 249 Armory Building, University of Illinois, Champaign, Illinois 61820. Single Copies are \$2 each; subscriptions are available on an annual basis for \$7 and cover a minimum of five issues per year.  
(Review copies are available on request)

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Nominations are now being accepted for the 1977 Isadore Gilbert Mudge Award. The award is presented annually by the Reference and Adult Services Division of the American Library Association to a person who has made a distinguished contribution to reference librarianship. The deadline for nominations is March 15, 1977. Nominations listing the nominee's qualifications and letters of support should be sent to Sarah R. Reed, Isadore Gilbert Mudge Citation Committee, School of Library Science, Emporia Kansas State College, Emporia, Kansas 66801.

## AGRICOLA



Ronald J. Walton, Chief  
Computer Applications, NAL

Two changes to the *AGRICultural ONline Access* (AGRICOLA) files will become effective with the data input into the December 1976 issue of the monthly tape. Please consult your local systems to determine when these data are loaded on your local computer centers or commercial vendors (Lockheed Information Systems, Systems Development Corporation and Bibliographic Retrieval Service).

The changes are as follows:

1. A new source code (6) is being added to the list of those already available. The list of possible source codes are as follows:

Code	Action	Definition
0	No Change	This is not one of the types listed below.
1	No Change	USDA Publication.
2	No Change	State Agricultural Experiment Station Publication.
3	No Change	State Agricultural Extension Service Publication.

*(Continued on page 9, col. 1)*

*(Continued from page 8, col. 2)*

4	No Change	Food and Agriculture Organization of the United Nations Publication.
5	No Change	Translations.
6	Addition	Other U.S. Publications not included under Source Codes 1, 2, or 3.

2. The following additions and deletions have been made to the list of permissible language codes.

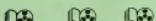
Add

Delete

SCC Serbo-Croatian (Cyrillic)	SER (Serbian)
SCR Serbo-Croatian (Roman)	CRO (Croatian)
JPN (Japanese)	JAP (Japanese)

Serbian See Serbo-Croatian (Cyrillic)

Groatian See Serbo-Croatian (Roman)



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## NEWS NOTES

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A complete translation of Soviet Agricultural Sciences research journal is being offered via subscription by Allerton Press, Inc., 150 Fifth Avenue, New York, New York 10011. The journal comes from the All-Union Lenin Academy of Agricultural Sciences. It purports to cover all aspects of agricultural research throughout the USSR. Available several months after the original is published in Russian. Annual subscription for 12 months, \$150.

\* \* \* \*

Need information on solar energy? Call (everywhere in continental U.S. except Pa.) 800-523-2929. (In Pa., call 800-462-4983.) This is the National Solar Heating and Cooling Information Center. Their lines are open weekdays from 9-5,

local time. Their staff will help you with any questions or problems concerning solar energy. They have lists of manufacturers, bibliographies, a speaker's bureau, keep track of legislation, etc. Mailing address for inquiries: the Center, P.O. Box 1607, Rockville, Maryland 20850.

\* \* \* \*

Friday, November 12, NAL staffers Gerald J. Sophar, Etiel Smith and David Hoyt attended an all day budget seminar at George Washington University sponsored by the Association of Government Accountants. The seminar consisted of two sessions; a morning session addressing the topic of the respective roles of the budget officer and the program officer, and an afternoon session addressing the topic of budget reform (Zero Base Budgeting and Sunset Laws).

Speakers for the morning session included representatives from the U.S. Department of Agriculture, Department of Commerce, and an outside consultant who spoke on the role of the budget officers and their difficulties in serving many masters. Budget officers attempt to balance the concerns of all program officials against the requirements of their budgets. Program officers, on the other hand, resent budget officers because they have to justify their expenses, and they don't like being held accountable. This increases the difficulty budget officers have in obtaining the necessary information to monitor the budget.

Program officers, however, are (or should be) "front-line personnel," responsible to Congress and not the budget officer for carrying out a legislative mandate. The concerns of the program officer should come first and these concerns should be supported by the budget officer.

The consensus arrived at in the morning session was that administrators require the assistance of both officials in carrying out their responsibilities to Congress; and that a balance must be achieved in the respective roles each officer plays.

The afternoon session consisted of a panel

*(Continued on page 10, col. 1)*

(Continued from page 9)

discussion by representatives from the House Budget Committee, House Appropriations Committee, the Senate Budget Committee, and the Joint Committee on Internal Revenue Taxation. Each representative addressed the topic of budget reform concentrating his remarks on the topic of Zero Base Budgeting. There was little agreement as to what constituted ZBB or what impact it would have; and the only consensus reached was that there are at least a dozen different varieties of ZBB now practiced throughout the country.

The Graduate School of Library Science, of the University of Illinois, will sponsor a one-day workshop on "Maps in Libraries; an Update," on Friday, September 9, 1977 at the Travelodge Motel on US Highway 45 north of Urbana. The main speaker at the workshop will be Mr. David A. Cobb, who is the Map and Geography Librarian at the University of Illinois at Urbana-Champaign.

The workshop will begin at 9:30 a.m. and end by 4 p.m. In the morning, Mr. Cobb will discuss such topics as map acquisitions, map cataloging, housing and storage of maps, etc. In the afternoon, there will be presentations on the maps and/or services of the University of Illinois Map and Geography Library; the Illinois State Library; the Illinois State Geological Survey; Illinois State Department of Transportation; the U.S. Geological Survey; and the Midwest Map Catalog.

The afternoon program will emphasize maps of Illinois and is designed for persons in public, school, and college libraries; no previous experience in working with maps is assumed or expected. Registration for the workshop will be limited to 90 persons, and applications will be accepted in the order of receipt. The registration fee is \$10, including lunch. For a registration blank or other information, write or call Mr. Edward C. Kalb, Office of Continuing Education, 116 Illini Hall, University of Illinois, Champaign, Illinois 61820 (217-333-2884).

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The University of Illinois Graduate School of Library Science has just released No. 125 in its series of *Occasional Papers*: "The Acquisition of Maps and Charts Published by the United States Government." In this paper, author Jane M. Low, Science and Documents Reference Librarian at

Trinity University in San Antonio, Texas, discusses the acquisition and availability of maps distributed by various agencies of the U.S. Government. Included in the list of issuing bodies are the departments of Commerce, Defense, Agriculture, Transportation, the Federal Power Commission, Central Intelligence Agency, and others. Examples of the types of maps issued by each office are given and ordering information is included whenever possible.

In addition to a discussion on what types of maps are available and where, Ms. Low answers questions concerning the need for maps and charts and their value as reference tools. In the section on current selection tools, several bibliographic sources are cited which list those maps currently available in various government agencies. Although numerous acquisition or selection tools are available for maps, discussion here focuses on those commercial or general government sources of current federally published maps. Another helpful section provides guidelines for the selection and evaluation of maps.

(Continued on page 8, col. 1)

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## NEW PUBLICATIONS OF NOTE

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*Agriculture in the People's Republic of China. Structural Changes and Technical Transformation.* Leslie Tse-Chiu Kuo. New York, Praeger Publishers, 1976. 288 p. (Praeger special studies in international economics and development). \$23.50. Dr. Kuo is a staff member of the National Agricultural Library.

The National Commission on Libraries and Information Science has issued a progress report on plans and recommendations developed by the Task Force on a National Periodicals System. The Task Force was appointed in January to prepare such a plan. Further information is available from NCLIS, 1717 K Street, N.W., Washington, D.C. 20036.

*Survey of the Emerging Solar Energy Industry.* Compiled by Justin A. Bereny and Francis de Winter. San Mateo, Solar Energy Information Services, 1977. \$50. Pre-publication discount of 20% offered on all orders received by March 31, 1977. For further information contact Solar Energy Information Services, P.O. Box 204, San Mateo, California 94401, (415) 347-2640.

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**NEW  
BIBLIOGRAPHIES**



*An Annotated Bibliography on the Copper River Delta with Emphasis on Wetlands Habitat Management.* P. G. Mickelson. Fairbanks, Alaska. Institute of Northern Forestry, U.S. Forest Service. Clearance to publish granted December 9, 1976.

A Bibliography of Books, Pamphlets, and Films Listed in the *Living Historical Farms Bulletin* from December 1970 through May 1976.  
Sharon Y. Eubanks. Washington, D.C. The Association for Living Historical Farms, Smithsonian Institution (1976).

*Grapes, Viticulture, Wine and Wine Making: a subject bibliography of books and periodicals in the Peter J. Shields Library, University of California, Davis.* John M. Sekerak. Sacramento, Mark Larwood Co., 1975. 804 p.

**QUICK BIBLIOGRAPHY SERIES**

The bibliographies in this series are primarily computerized online or batch bibliographies emanating from searches performed by the NAL Reference staff in response to customer requests.

Searches are selected for inclusion in this series for the currency of topic, depth of interest among NAL clientele, relative length (approximately 150 citations or more) and probable value to a larger audience. All titles in this series will be listed monthly for a six month period after which they will be withdrawn. Any revisions or updates will be renumbered and reannounced. Only one copy will be sent of a title; however, requestors may make photocopies. To request a copy of a "quick bibliography" send the title, series number, and a return addressed label to:

Reference Division  
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NAL -- BIBL. -- 76-01. *Birds and Agriculture, 1968-1976.* October 1976. 150 citations. AGRICOLA

NAL -- BIBL. -- 76-02. *Powdery Mildew (Erysiphe Gramineas) of Grains and Grasses, 1969-1976.* September 1976. 345 citations. AGRICOLA

NAL -- BIBL. -- 76-03. *Mirex and the Fire Ant, 1969-July 1976.* September 1976. 173 citations. AGRICOLA

NAL -- BIBL. -- 76-04. *No-Tillage Farming, 1968-1976.* October 1976. 222 citations. AGRICOLA

NAL -- BIBL. -- 76-05. *Sugar Maple (Acer Saccharum), 1969-September 1976.* October 1976. 184 citations. AGRICOLA

NAL -- BIBL. -- 76-06. *Forest Fire Control Management, 1968-1976.* October 1976. 203 citations. AGRICOLA

NAL -- BIBL. -- 76-07. *Cattle Grubs and Control (Hypoderma Lineatum, Hypoderma Bovis), 1969-1976.* November 1976. 131 citations.

NAL -- BIBL. -- 77-01. *Christmas Tree Production.* 212 citations from AGRICOLA, English only Fall, 1968 to August 1976. Search by Jerome Rafats.

NAL -- BIBL. -- 77-02. *Availability of Metals in Soils.* 200 citations from AGRICOLA, no exclusions. Search by Charles N. Bebee.

NAL -- BIBL. -- 77-03. *Atrazine.* 212 citations from AGRICOLA, English only. Search by Jerome Rafats.

NAL -- BIBL. -- 77-04. *Concentrations of Metals in Soils.* 189 citations from AGRICOLA, no exclusions. Search by Charles N. Bebee.

**WANTED: Bibliography of Agriculture,**  
March 1974 and January 1975 (main issue and subject index). Send surplus issues to Wallace C. Olsen, NAL, Beltsville, MD 20705.

## AGRICULTURE DATEBOOK



*March 7-9: NATIONAL FEDERATION OF ABSTRACTING AND INDEXING SERVICES ANNUAL CONFERENCE.* Stouffers National Center Hotel, Crystal City, Arlington, Virginia. Contact: Mrs. Hélène Lemp, 9650 Rockville Pike, Bethesda, Maryland 20014.

*April 17-22: SOUTHWESTERN BRANCH MEETING, ENTOMOLOGICAL SOCIETY OF AMERICA,* Holiday Inn, Guadalajara, Mexico. Contact: R. L. Harris, Sec.-Treas., USDA, ARS, P.O. Drawer DG, College Station, TX 77840.

*April 18-21: NATIONAL INFORMATION CONFERENCE & EXPOSITION.* 1st annual meeting. Shoreham Americana Hotel, Washington, D.C. Contact: Information Industry Association, 4720 Montgomery Lane, Bethesda, Md. 20014.

*April 27-30: COUNCIL ON BOTANICAL AND HORTICULTURAL LIBRARIES.* 9th annual meeting. Morton Arboretum, Lisle, Illinois. Further information may be obtained from Ian MacPhail, Librarian, Sterling Morton Library, The Morton Arboretum, Lisle, Illinois 60532

*April 28-29: NATIONAL ARCHIVES HISTORY CONFERENCE,* Washington, D.C. Co-sponsor: Agricultural History Society. Title—Farmers, Bureaucrats and Middlemen: Historical Perspectives on American Agriculture. Write: Dr. Truly Peterson, National Archives and Records Service, Room 103, Washington, D. C. 20408.

*May 9-11: BELTSVILLE SYMPOSIUM II, "BIOSYSTEMATICS IN AGRICULTURE."* Beltsville, Md. Contact: BARC Symposium, Room 117, B-001, BARC-West, Beltsville, Md. 20705

*May 18-27: XIII INTERNATIONAL GRASSLAND CONGRESS.* Contact: Organisationsbüro, XIII. Internationaler Graslandkongress, Deutsche Demokratische Republik DDR-115 Berlin, Köpenicker Allee 39-57.

*June 5-8: SPECIAL LIBRARIES ASSOCIATION 68TH ANNUAL CONFERENCE.* New York, N.Y.

*June 12-17: 22ND SEMINAR ON THE ACQUISITION OF LATIN AMERICAN LIBRARY MATERIALS (SALALM).* University of Florida, Gainesville. Contact: Lon Wetherbee, University of Texas at Austin, Benson Latin American Collection, Sid Richardson Hall 1-108, Austin, Texas 78712.

*June 16-23: ALA ANNUAL CONFERENCE.* Detroit, Michigan.

*June 21-23: 4TH SYMPOSIUM ON MACHINE PROCESSING OF REMOTELY SENSED DATA.* Sponsored by Purdue University with the cooperation of the American Society of Photogrammetry. Contact: John C. Lindenlaub, LARS, Purdue University, 1220 Potter Drive, W. Lafayette, Indiana 47906.

*July 11-17: 6TH ASIAN PACIFIC WEED SCIENCE SOCIETY CONFERENCE,* Jakarta/Indonesia.

*July 17-20: AQUATIC PLANT MANAGEMENT SOCIETY ANNUAL MEETING,* Holiday Inn (downtown), Minneapolis, MN/USA.

*August 2-3: EUROPEAN WEED RESEARCH SOCIETY SYMPOSIUM,* Uppsala/Sweden.

*September 26-October 1: AMERICAN SOCIETY FOR INFORMATION SCIENCE.* Chicago, Illinois.

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*AGRICULTURAL LIBRARIES INFORMATION NOTES* is published monthly by the U.S. Department of Agriculture, National Agricultural Library, Beltsville, MD 20705. Leila Moran, Editor.

January 1, 1977

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CURRENT AWARENESS SERVICE - UPDATE 1977

A major goal of the National Agricultural Library is to announce and make available current agricultural and related useful publications to USDA researchers and administrative personnel, to land-grant colleges, and the world-wide agricultural community. To attain this end NAL draws on a variety of resources, both internally and externally generated and publicly and privately produced. Participation by both the public and private sector are essential to the maintenance of any large technical information program, and therefore NAL seeks to attract both.

Readers of ALIN are familiar with the Bibliography of Agriculture, published by ORYX Press and the AGRICOLA - formerly CAIN - data base available for on-line searching from Lockheed Information Systems, or the Systems Development Corporation; and as previously announced in a June 1976 supplement to ALIN, Current Contents - Project 38. What follows is an update on that Project.

CURRENT CONTENTS - PROJECT 38

For readers who missed the first offer of Project 38 or who may not have seen the announcement, it is an NAL administered program which makes the Current Contents Series of publications of the Institute for Scientific Information (ISI) available to the agricultural research community at sharply reduced rates. First introduced in 1970, ISI agreed to treat separate subscriptions from USDA agencies or cooperating organizations utilizing Federal funds at group subscription rates. Thus individual subscribers were able to realize savings of up to \$320 per title on 5 year subscriptions.

Although the agreement was obviously beneficial to the participating organizations, there were questions regarding the overall cost of administering the program. The savings on subscriptions were offset by costs incurred in transferring funds from the subscriber to NAL so that ISI could be paid. These problems have now been overcome. The Agricultural Research Service has underwritten the continuation of Project 38 by signing a 5 year subscription contract with ISI. The contract period runs from January 1, 1976 until December 31, 1980 and we now have 350 subscribers. However readers who missed last year's offer may still subscribe for the remaining four years (January 1, 1977 to December 31, 1980). Under the contract the NAL will monitor the contract and validate subscription orders. The Contracting Officer's Representative is Gerald J. Sophar, Executive Officer, National Agricultural Library.

## CURRENT CONTENTS

Current Contents is a series of publications by the Institute for Scientific Information (ISI) based in Philadelphia, Pennsylvania. It is an effective and economic solution of the treble problem of literature scanning, reading selection, and rapid dissemination of information. The weekly issues present to the reader the titles of papers and all other substantive material from more than 1000 journals reporting worldwide research and practice in the social and behavioral sciences. This comprehensive service enables scholars, scientists, educators, and managers to keep up with new developments in their own and related fields. There are seven editions in this series and two separate indexes, each of which is published as a separate weekly issue. The editions are:

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